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NATURAL DISASTER REDUCTION: INTERRELATIONSHIPS BETWEEN TECHNOLOGICAL AND NATURAL HAZARDS

Technical session

Addendum

Future disaster trends and policy implications for developing countries

Summary of presentation by Professor Enrico Quarantelli, Disaster Research Center, University of Delaware, United States of America

1. As the developing world continues to industrialize and urbanize, it is continually creating conditions for more and worse disasters in the future that will, among other things, contribute further to environmental degradation and hinder developmental programmes. The processes of industrialization and urbanization, however positive in effects along certain lines, will both increase the number of potential disaster agents and the vulnerabilities of communities and populations that will be at risk.

2. Reasons for an increase are:

(a) Accelerating expansion of accidents and mishaps in the chemical and nuclear areas;

(b) Technological advances which reduce some hazards but make some old threats more dangerous;

(c) New versions of old and past dangers, such as urban droughts;

(d) Emergence of innovative kinds of technologies, such as computers and biogenetics, which present distinctively new dangers;

(e) An increase in multiple (e.g., natural disasters creating technological ones) or synergistic type disasters, resulting in more severe environmental consequences.

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3. An increase in vulnerabilities will occur because:

(a) Both natural and technological disaster agents will simply have more built-up areas to impact;

(b) More vulnerable kinds of population will be impacted than in the past;

(c) Metropolitan areas will be increasingly impacted and along certain lines the social organizations and group configurations of urban areas are not particularly well suited for coping with disasters;

(d) There will be disastrous effects on an increasing number of localities from sources that may be quite distant;

(e) Certain future disasters may have catastrophic potential even though they may produce no casualties nor do much property damage.

4. Although there are a few countervailing trends, these two sets of conditions will insure both quantitatively more and qualitatively worse disasters in the coming decades. Among the major implications are a furtherance of environmental degradation, in some cases polluting some areas almost forever and creating problems for future generations. Projected future disasters will also slow down the implementation of developmental programmes and perhaps even the adoption of otherwise worthwhile technological innovations. Policies can, however, be established and steps can be taken to reduce and weaken some of the negative effects of probable catastrophic disasters of the future, including:

(a) Noting and accepting the fact that all disasters are essentially social occasions that primarily have to be dealt with by social more than technological means;

(b) Eliminating the distinction in planning between natural and technological disasters and moving to an all-hazard or generic approach;

(c) Assigning disaster mitigation at least as much priority in planning and application as emergency preparedness, response and recovery;

(d) Integrating disaster planning more closely into the developmental planning or social change processes of the social system involved;

(e) Ascertaining in which ways disaster problems are similar to and different from other environmental problems, and concurrently addressing both where there are similarities.

5. If the right policies and measures are put in place, the future will not be the past revisited or simply only the present repeated.